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Division of Natural and Physical Sciences

February 15, 1974

Prof. Joshua Lederberg
Chairman, Dept. of Genetics
Stanford University
Stanford, CA 94305

Dear Dr. Lederberg:

This letter is prompted by the recent announcement by the Stanford Medical Center News Bureau, concerning establishment of a national computer facility for medical research, under your direction. The project as outlined in the press release is so interesting to me and so close in many aspects to work I have been doing for the past three years that I wish to investigate the possibility of becoming associated in some way with the program.

My relevant experience touches on two aspects of the project as outlined in the report. First, I recently spent two years as a research associate at the Computer Graphics Laboratory of Princeton University. My main responsibility was development of graphical techniques in X-ray crystallographic analysis of biological molecules, and in conformational analysis of nucleic acids and proteins. Our equipment was a PDP-10 computer with an Evans & Sutherland LDS-1 graphics computer, and the project was funded by an NIH Research Resources grant to Professors Robert Langridge and W. Todd Wipke of the Princeton Biochemistry and Chemistry Departments, respectively.

One of our recent achievements was the solution of the crystal structure of GpC, a dinucleoside phosphate, and the largest structure ever solved at atomic resolution without isomorphous replacement (Biopolymers 12, 2731 (1973)).

I am presently continuing conformational studies of nucleic acid substituents for the purpose of predicting stable crystal and solutions structures.

The other area of experience is my familiarity with computer systems in medical research in general. I am working as a consultant to the Oil, Chemical, and Atomic Workers Union, setting up a nationwide screening

program for detecting respiratory disease among blue-collar workers. After collecting results of spirometric field tests on workers, the data is received here in Denver and processed by computer for two purposes: alerting the individual workers and their physicians of possible health problems, and building a data base for epidemiological studies of health effects of certain respirable dusts and chemicals.

In the event that you are in a position to consider hiring new research personnel, I have taken the liberty of enclosing my resume. Your venture appears to be both promising and exciting, and I would like the opportunity to become a participant.

Sincerely yours,

A handwritten signature in dark ink, appearing to read "Steven D. Stellman". The signature is fluid and cursive, with a long horizontal stroke at the end.

Steven D. Stellman